REMARKS

Claims 1-17 are all the claims pending in the application. By this Amendment, Applicant adds claims 16 and 17. Claims 16 and 17 contain no impermissible new matter, and are clearly supported throughout the specification, *e.g.*, pages 2 and 5 of the specification.

Preliminary Matter

Applicants filed a Replacement Drawing on August 19, 2004. The Examiner is respectfully requested to acknowledge receipt and indicate approval of the Replacement Drawing in the next Patent Office paper.

Summary of the Office Action

The Examiner withdrew the previous rejections. The Examiner, however, found new grounds for rejecting the claims. In particular, the Examiner rejected claims 1-9 and 15 under 35 U.S.C. § 112, second paragraph, claims 1, 2, 4, and 6-9 under 35 U.S.C. § 102(e), and claims 3, 5, and 10-14 under 35 U.S.C. § 103(a).

Claim Rejection under 35 U.S.C. § 112

With respect to claims 1-9 and 15, the Examiner now alleges that it is unclear how the sink can report the network status information without going through the intermediate nodes (see page 2 of the Office Action). In other words, the Examiner alleges that the unique feature of "no intermediate network node reports to said data source on said network status information" as set forth in claims 1, 2, and 15 is unclear.

Applicant respectfully submits that one of ordinary skill in the art would readily recognize what is being claimed by the unique feature of "no intermediate network node reports to said data source on said network status information," as did the Examiner. That is, as

acknowledged by the Examiner, there is a distinction between the terms "reporting" and "forwarding" (see page 2 of the Office Action). Claims 1, 2, and 15 simply state that the intermediate node does not report the network status information. This feature does not preclude the intermediate nodes from transmitting and/or forwarding the status report of the sink node. The intermediate nodes forward reports, but they do not themselves report.

By way of analogy, the Examiner might imagine the sink as a credit card company, and the intermediate nodes as the postman. The credit card company bills one for purchases, and the postman forwards the bills. The postman does not bill anybody for purchases, nor does he care about the content of what is being forwarded. Just as the postman forwards bills but does not bill the consumer, the intermediate nodes forward but do not report the network status information.

The language of the claim is respectfully submitted to be sufficiently clear. If the Examiner feels the claimed invention is not enabled, the Examiner may make a rejection under 35 U.S.C. §112, ¶1. In any event, the rejection under 35 U.S.C. §112, ¶2 should be withdrawn.

Claim Rejections under 35 U.S.C. § 102

The Examiner rejected claims 1, 2, 4, 6-9, and 15 under 35 U.S.C. § 102(e) as being anticipated by a newly found reference, USP 6,765,904 to Anandakumar et al. (hereinafter "Anandakumar"). Applicant respectfully traverses this rejection in view of the following comments.

To be an "anticipation" rejection under 35 U.S.C. § 102, the reference must teach every element and recitation of the Applicant's claims. Rejections under 35 U.S.C. § 102 are proper only when the claimed subject matter is identically disclosed or described in the prior art. Thus,

the reference must clearly and unequivocally disclose every element and recitation of the claimed invention.

Of the rejected claims, only claims 1, 2, and 15 are independent. Independent claim 1 is a unique combination of features, not disclosed by the prior art reference cited by the Examiner. Claim 1 requires:

> wherein only said data sink reports to said data source on said network status information of said communications network in its neighbourhood...

The Examiner asserts that claim 1 is directed to a network status reporting method and is anticipated by Anandakumar. Specifically, the Examiner asserts that Anandakumar's report message sent from the destination to the source are equivalent to the sink reporting to the source information on the communication network in its neighborhood. Applicant has carefully studied Anandakumar's teachings of the reporting messages, which lack reporting information about the communication network in the neighborhood of the destination computer.

Anandakumar discloses a process of sending packets of real-time information at a sender. In Anandakumar, the packets of real-time information with a source rate, time/path diversity rate, and the amount of diversity are generated at the sender, hereinafter collectively referred to as QoS (see *Abstract*; col. 3, lines 28 to 42). Specifically, Anandakumar discloses a system for adaptation to network conditions by adjusting communications variables, *i.e.*, the transmission rate and the diversity (col. 22, lines 43 to 56).

In Anandakumar, the source computer has a transmit section 311 with a Rate/Diversity Adaptation control block 331. The control block 331 determines the degree of diversity by feeding a STATE command to a speech encoder 321. The destination computer has a receive

section 361'. The receive section 361' has a Delay-jitter Handling block 371' coupled to a Lost Packet Compensation block 381', which also supplies packet loss information descriptive of source-to-destination packet communication back via packet network 351 to the Control block 331 in the source (Fig. 3; col. 23, lines 4 to 27).

In Anandakumar, the block 381' calculates the QoS measure, such as packet loss ratio, in the destination and supplies them to the RTCP packetizer 395'. The packetizer 395' incorporates this QoS measures into the payload of return RTCP packets and sends these packets the to control block 331. The path of communication from the Lost Packet Compensation 381' to the Rate/Diversity control block 331 may be a packet network 351, *i.e.*, a satellite network, a wireless network, PSTN, etc. (Fig. 3; col. 23, line 55 to col. 24, line 44).

Anandakumar's report packets, however, carry information about the entire network. That is, Anandakumar's report packets carry information about the path from the source to destination computers and not about a portion of the network around the destination computer. Anandakumar, for example, teaches that the report packets identify a number of lost packets thereby providing a QoS measurement and delay jitters (col. 25, line 4 to col. 26, line 34). In other words, in Anandakumar, the destination computer does not provide the status information on a portion of the network in its neighborhood but rather on the entire network, *i.e.*, the path between the source and destination.

Therefore, "wherein only said data sink reports to said data source on said network status information of said communications network in its neighbourhood," as set forth in claim 1 is not disclosed by Anandakumar, which lacks having the receiver computer report status information of the communication network in its neighbourhood as opposed to the entire network, *i.e.*, the

entire path connecting the sender and the receiver computers. For at least this exemplary reason, independent claim 1 is patentably distinguishable from Anandakumar and it is appropriate and necessary for the Examiner thus to withdraw this rejection of independent claim 1.

Independent claims 2 and 15 contain features that are similar to the features argued above with respect to claim 1, and those arguments are respectfully submitted to apply with equal force here. For at least analogous exemplary reasons, therefore, Applicant respectfully requests the Examiner to withdraw this rejection of independent claims 2 and 15, and dependent upon claim 2, claims 4 and 6-9.

Claim Rejections under 35 U.S.C. § 103

Claims 3, 5 and 10-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Anandakumar et al. in view of U.S. Patent No. 6,349,096 to Liu et al. (hereinafter "Liu").

Claims 3 and 5 depend on claim 2 and claims 11-14 on claim 10. Claim 2, among a number of unique features, recites: "wherein said data source adapts said transmission rate on the basis of network status information, and wherein only said data sink is able to report said network status information of said communications network in its neighbourhood to said data source and no intermediate node is able to report network status information to said data source." Applicant has already demonstrated that Anandakumar fails to teach or suggest the unique features of claim 2. Applicant respectfully submits that Liu does not cure the deficient teachings of Anandakumar for the reasons detailed below.

Claim 10 recites: "wherein the data source adapts the transmission rate on the basis of a network status reported by at least one of the line termination element and the network termination element, and wherein the network status is determined based on a quality of signal of

the first network only." The Examiner acknowledges that Anandakumar does not teach or suggest at least this unique feature of claim 10. The Examiner, however, alleges that Liu cures the deficient teachings of Anandakumar. Applicant respectfully disagrees.

Turning to the cited reference, Liu teaches a system that can be dynamically configured to achieve an optimal routing path for an end-to-end data link connection. An optimal data path can be determined by a digital subscriber loop (DSL) user based on particular bandwidth requirements, data rate cost constraints, and/or data delay requirements. The data path can be set up to include one or more data routes, including the regular digital public switching telephone network (PSTN), a wide area networks (WAN), or virtual permanent circuit links via digital cross-connects (DCS) (see *Abstract*, col. 4, lines 4 to 20). Liu teaches a switching network 200 with a DSLAM 240, which provides a connection of a DSL line 225 to all data paths within the switching network 200, including PSTN 250, WAN 260, and various digital cross-connects (DCS) 270 connecting ISPs 230 and 232 (Fig. 2; col. 6, lines 28 to 38).

In particular, Liu teaches that if the user opted a routing through WAN 260, the WAN call setup process 430 can be used to connect an end-to-end packet-switching link. Such routing might be requested, for example, where the data transfer is not time sensitive, but requires the current modem-use model. Specifically, the user first decides and requests a target data rate X. In response, the DSL codecs at CPE 231 and DSLAM 245, and then decide the available rate Y for DSL 225 by taking into consideration, among other things, the caller requested target rate, line quality of DSL 225, etc. Next, the call request is propagated to a CO associated with a destination site CPE 231, and the DSLAM 240' of the remote CO then calls the DSL of the called party and performs similar rate negotiation process of the above type to determine an

available rate Z on DSL 225'. Depending on the result, the DSLAM 240 then selects R as the lower of data rates Y and Z as the tentative achievable rate for the overall data link. Finally, in Liu, the WAN 260 then allocates and sets up the packet connection by trying to meet the above data rate R and sends the final rate to both the calling and called parties. The end-to-end connection then starts to communicate data from user site CPE 230 to destination site 232 through WAN 260 (Fig. 4C; col. 9, line 39 to col. 10, line 3).

Liu, however, teaches setting up a call via WAN and not reporting status of the network. Liu teaches that the CPE 231 and the DSLAM decide the available rate Y for the network DSL 225 by taking into consideration the line quality of the DSL. Same procedure is executed by CPE 231' and DSLAM 240' to decide the available rate X. That is, the line quality is taken into consideration only for setting up the connection over that same line. Next, using the determined rates Y and X for the networks DSL 225 and DSL 225', respectively, the lowest of the two rates is selected and the WAN network 260 attempts to achieve this lowest rate (col. 9, lines 48 to 67). Liu does not evaluate the network status but simply uses the available rates to set up a call. That is, in Liu, there are no reports since data is not transmitted yet (the call was not set up).

In addition, in Liu, it is not the status information of the DSLAM that is taken into account when setting up a connection via WAN but rather the selected lower rate of the two DSL networks. In short, Liu is no different from the prior art where the line quality is being considered only in selecting the bit rate for this line.

Moreover, Liu teaches that the rate is not set at a source CPE 231 based on the rate on WAN network. In fact, to set the rate at the source and at the destination, separate, analogous independent processes are performed, *i.e.*, rate Y is set independent of rate X, and then, based on

these rates, the rate for the WAN network is set up. That is, in Liu, the connection set up at the source network and destination network is used to set up the connection in the intermediate network. In other words, the rate at the source CPE 231 is not set up based on rate on WAN but rather the process is vise versa. In short, Liu does not cure the deficient teachings of Anandakumar.

Therefore, "wherein said data source adapts said transmission rate on the basis of network status information, and wherein only said data sink is able to report said network status information of said communications network in its neighbourhood to said data source and no intermediate node is able to report network status information to said data source," as set forth in claim 2 and "wherein the data source adapts the transmission rate on the basis of a network status reported by at least one of the line termination element and the network termination element, and wherein the network status is determined based on a quality of signal of the first network only," as set forth in claim 10 are not suggested or taught by the combined teachings of Anandakumar and Liu, which lack having the data source adapt the transmission rate on the basis of the report of the network status information at the destination.

For at least these exemplary reasons, claims 2 and 10 are patentable over the combined teachings of Anandakumar and Liu. Claims 3 and 5 are patentable at least by virtue of their dependency on claim 2 and claims 11-14 are patentable at least by virtue of their dependency on claim 10. Therefore, Applicant respectfully requests the Examiner to withdraw this rejection of claims 3, 5, and 10-14.

New Claims

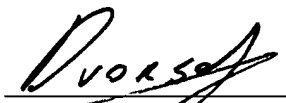
In order to provide more varied protection, Applicant adds claims 16 and 17. Claims 16 and 17 are patentable at least by virtue of their dependency on claims 2 and 10, respectively.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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